

Training and Simulation Industry Symposium

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TRADOC VISION

ARCHITECT OF THE ARMY

Victory Starts Here. TRADOC is the Architect of the Army, and “*thinks for the Army*” to meet the demands of a Nation at war while simultaneously anticipating solutions to the challenges of tomorrow.

To shape both today’s Army and the Future Combat Force, the Army’s Architect:

- Recruits and Trains Soldiers
- Develops Adaptive Leaders
- **Designs today’s Army Modular Force and the Future Combat Force**
- Maximizes Institutional Learning and Adaptation



CONTEXT

- Nation at war
- Protracted, full spectrum conflict
- Adaptive, asymmetric threat
 - Some niche capabilities better than ours
 - Use of commercial networks
 - Information Operations
 - No rules
- Tactical missions with strategic implications
- Cultural awareness impacts military operations
- Soldiers deploy shortly after arrival at first unit

JOINT OPERATIONAL ENVIRONMENT

Adversaries Will Seek to:

- Deter US involvement
- Isolate US from local support or allies
- Contest entry operations

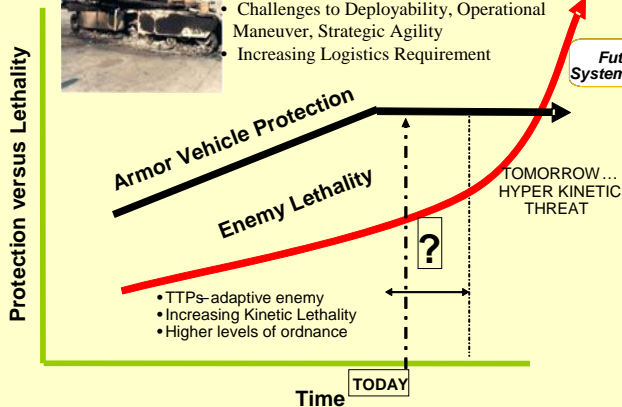
Operational Complexity:

- Adversaries who have “gone to school” on U.S. operations
- Asymmetry
- Simultaneous, full spectrum operations in complex terrain



Adversaries are Closing the Gap

- Technical limit to volumetric/ armor solution
- Challenges to Deployability, Operational Maneuver, Strategic Agility
- Increasing Logistics Requirement

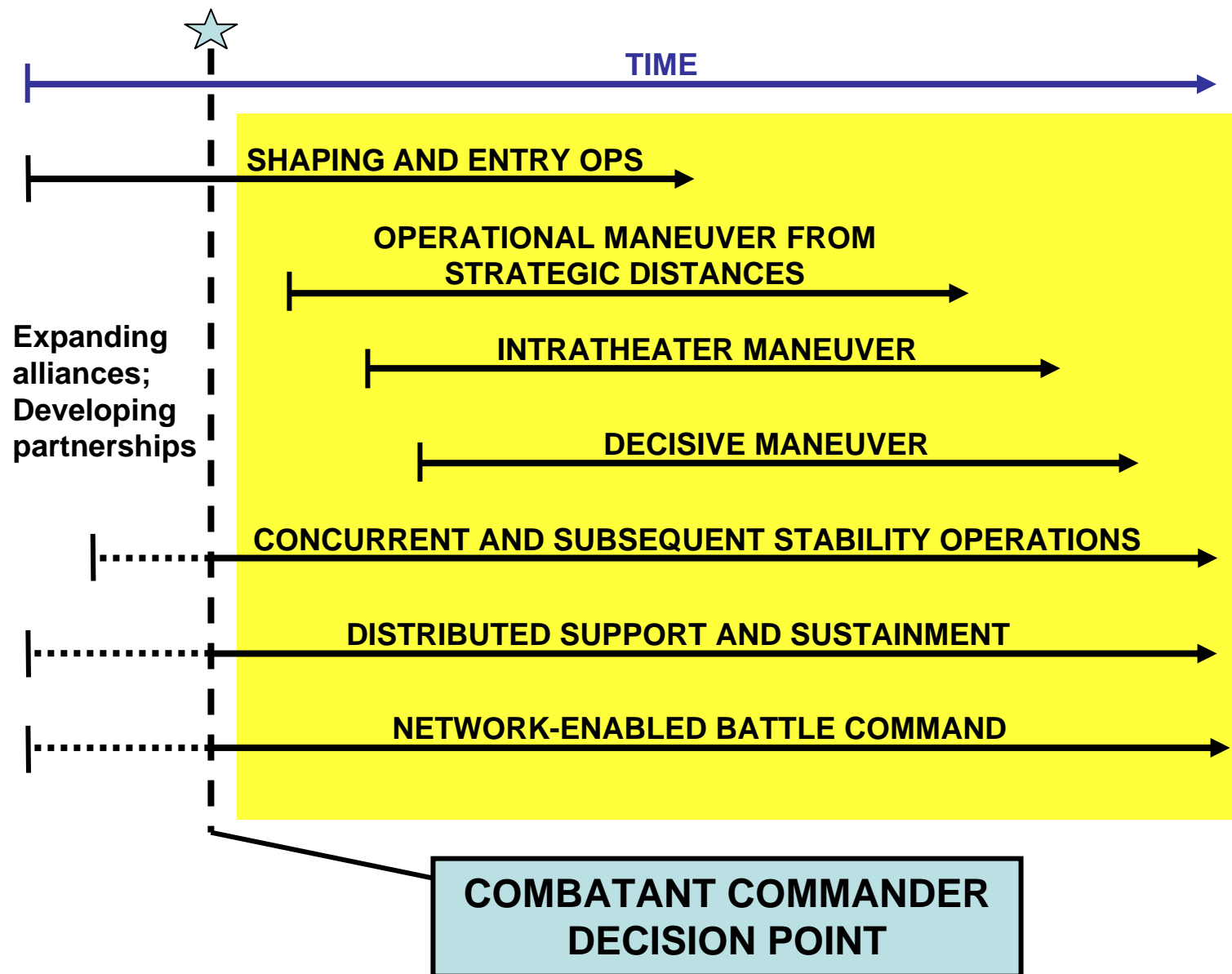


Future Forces:

- Project from US base and sustain in anti-access environment
- Must be multi-role capable – Full Spectrum
- Lethality and survivability overmatch... perhaps in new/different ways.



KEY IDEAS – THE ARMY IN JOINT OPERATIONS



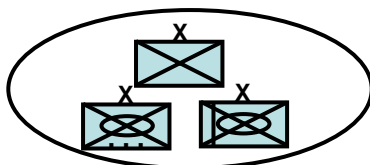


Setting the Stage

Operating Environment



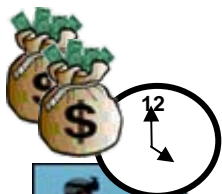
Modularity



**FM 7-0
Training the Force**

**PROGRAM MANAGER
FCS
BRIGADE COMBAT TEAM**
One Team-The Army/Defense/Industry

ARFORGEN



Declining Resources

...New realities are impacting the way we train

...Some elements endure

The Fundamentals are sound (FM 7-0/7-1)

- Standards-based
- Crawl/walk/run
- Multi-echelon in nature
- Commander/NCO led
- CTC Framework
- AARs & Feedback
- Integration of Operational, Institutional and Self Development domains

...Some elements must change

- Training Support System

Training remains the cornerstone of unit readiness in meeting the full spectrum challenges of the future



Addressing the Challenge



- Understanding the new realities, the Future Combat Systems program designates **training** as **Key Performance Parameter**...first time a major operational system procurement recognizes training
- There are **39 Training Requirements** in the Operational Requirements Document



The FCS family of systems will have **embedded** individual and collective training capability that supports **live, virtual and constructive training** environments. It will support mission rehearsal from crew to brigade level

...mission rehearsal tools include

- Digital Terrain
- Computer Generated Forces
- AAR Capability
- Training Management
- Training Support Packages
- Rapid Play-back
- Joint Interoperability

...Leading to units that can:

- ✓ Rapidly create tailored teams and units
- ✓ Achieve readiness levels required to deploy in full spectrum operations
- ✓ Provide continuous Performance Evaluation
- ✓ Link to institutional SMEs...and deployed units...in real time
- ✓ Optimize training time



The Good News

Embedded Training Capabilities will provide a *fully integrated* means to train in the *live, virtual, and constructive environments* and shows the *potential to reduce resources* in both the operational and institutional domains reducing the need for centralization and begins to close the gap to self training

The Bad News

Embedded Training capabilities are unlikely to provide the independent detailed analysis and synthesis necessary for units to truly “train themselves” ... and we need to start building the support system now.



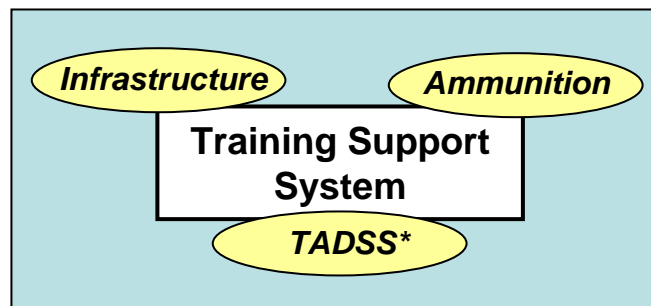
A WAY



Build a Live, Virtual, and Constructive training environment that provides timely, relevant and affordable training and mission rehearsal. Training will be a dynamic process with the ability to respond to full spectrum operations. It will include networks for mission rehearsal and simulation as well as measure performance and allow for multiple iterations to improve overall operational effectiveness in units (Strategic Plan for Transforming DoD Training, Mar 02)

Big Ideas

- Embedded capability in organic, integrated systems provides access to live, virtual, and constructive environments anytime, anywhere
- Full range of training tasks from individual through battalion
- Reduce training overhead and increase commonality between operational and training systems
- Joint interoperable



Enabled By -- "The How"

- Facility Upgrades
- Master Trainers
- Training Centers of Excellence

Evolving To

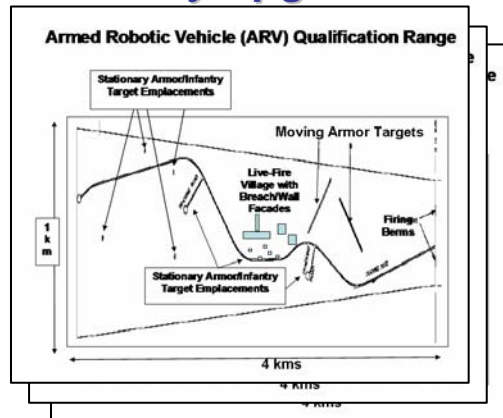




Required Enablers- The How



Facility Upgrades



Training a networked force with advanced systems will require an investment in facilities

✓ Must review current capability and build facilities that provide

- Fixed Tactical Internet
- Urban Training Facilities
- Digital Battle Area Course
- Motor Pool Enhancements
- Armed Robotic Vehicle Qualification
- UAV Training Air Strips
- Mission Support Training Facility

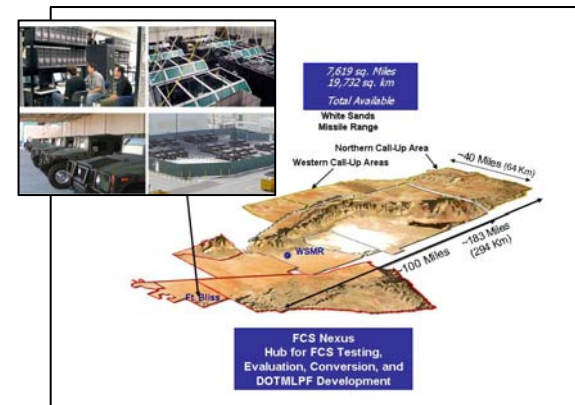
Master Trainers



Master Trainers--A New Generation ... provide expertise for units to fully exploit the tremendous potential of embedded training

- ✓ Assigned at appropriate echelon to facilitate training management and execution ... linked to the institution
- ✓ Possible linkage to “57” career field
- ✓ When deployed in theater represents a capability to do “*Red Teaming*” for the Commander, a significant lesson learned from current operations
- ✓ Cadre from which to conduct AARs
- ✓ Will assist in the analysis to help determine what happened and why.

Training Centers of Excellence



Consolidation of all combat development, training development & training “becomes the center of gravity”

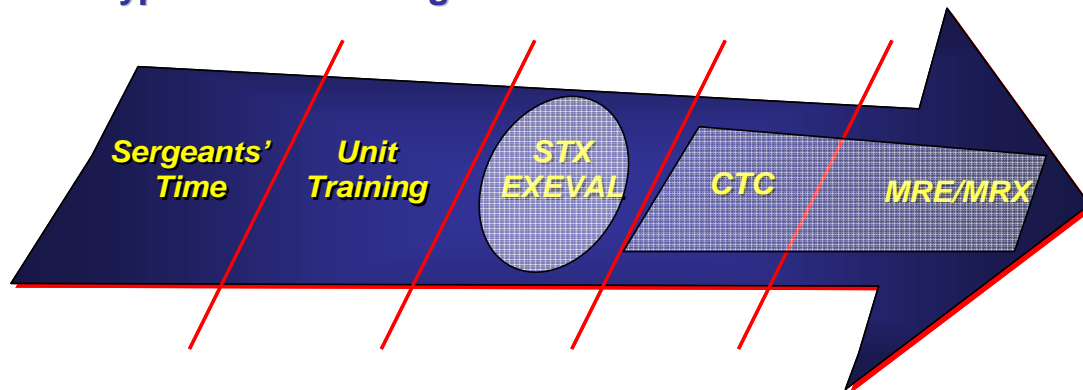
- ✓ *Stryker Lessons Learned* show Centers of Excellence best way to integrate DOTMLPF
- ✓ Focused on Base & Spin Outs
- ✓ Develop Distance Learning Course for use in field
- ✓ *Integrate “spin outs” and base programs*
- ✓ Provides Program of Instruction for ILE and SSC
- ✓ *Multiple Courses of Action*



Implications for Training

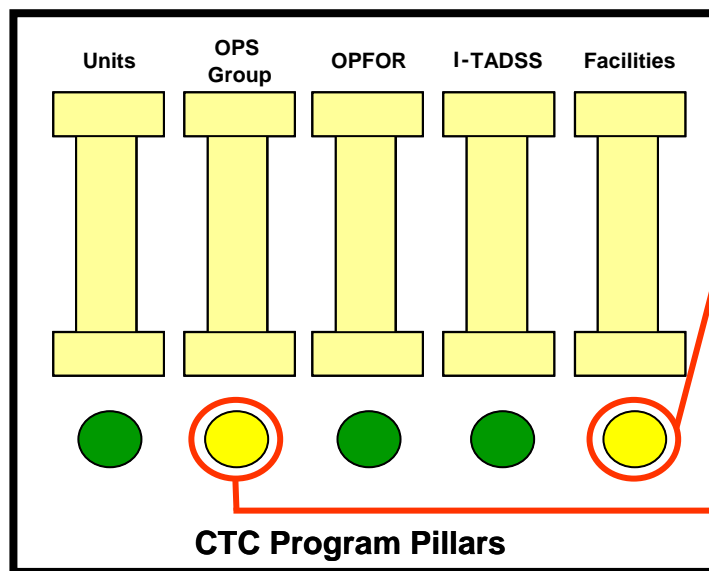


Typical Unit Training Plan



...from this

- ❑ Training resourced & certified two levels down
- ❑ Must move to training center for CTC and MRE
- ❑ Constant pressure for resources...MILES, simulation time, training ammo, etc
- ❑ Significant professional cadre always required



...to this

- ❑ **Facilities Upgrades** provide unprecedented access to instrumentation, simulations and embedded evaluation tools allow near-CTC training anytime, anywhere
- ❑ Permits multiple repetitions of training iterations
- ❑ Reduces pressure for resources
- ❑ **Master Trainers** full-time "master gunners" -- assist commanders/leaders with synthesis and analysis of data ... kept current on innovations in equipment and training. Equal importance during training and combat.



Implications for Institutional Training



- **Potential to reduce collective live training at institution to focus on individual skill but requires Master Trainer's at specific echelons.**
- **Institution becomes an active participant in the operational training domain**
- **Schools better linked with ARFORGEN**
- **May require establishment of Resource Centers...Centers of Excellence at Proponent Schools**
- **Allows ability to share Live, Virtual and Constructive environments between domains...provides for better inter-domain coordination**
- **Potential for Virtual teaming among OCs, OTs and Master Trainers**
- **Real Time Integration of Lessons Learned from ongoing conflicts**
- **Embedded Training potentially reduces time spent in "TTHS" account**

SUMMARY

- New realities are impacting the way we train...some elements must change
- The most urgent training/simulation need:
 - Replication of lethal/non-lethal effects and their interaction
 - Representation of culturally accurate action/reaction/counter-action
 - Ability to represent multi-sided attributes, actions and attitudes
 - Ability to alter training environment in real time
- FCS provides the materiel for full spectrum dominance in complex environments... will cascade to the current force
- The FCS Training Capabilities will change the Army's approach to training the force.
 - Provides more horizontally & vertically integrated training (live, virtual and constructive environments) for units; and create more timely, flexible, and accessible individual, collective, and leader battle staff training...
- Moving towards the objective of unit self training

Victory Starts Here!